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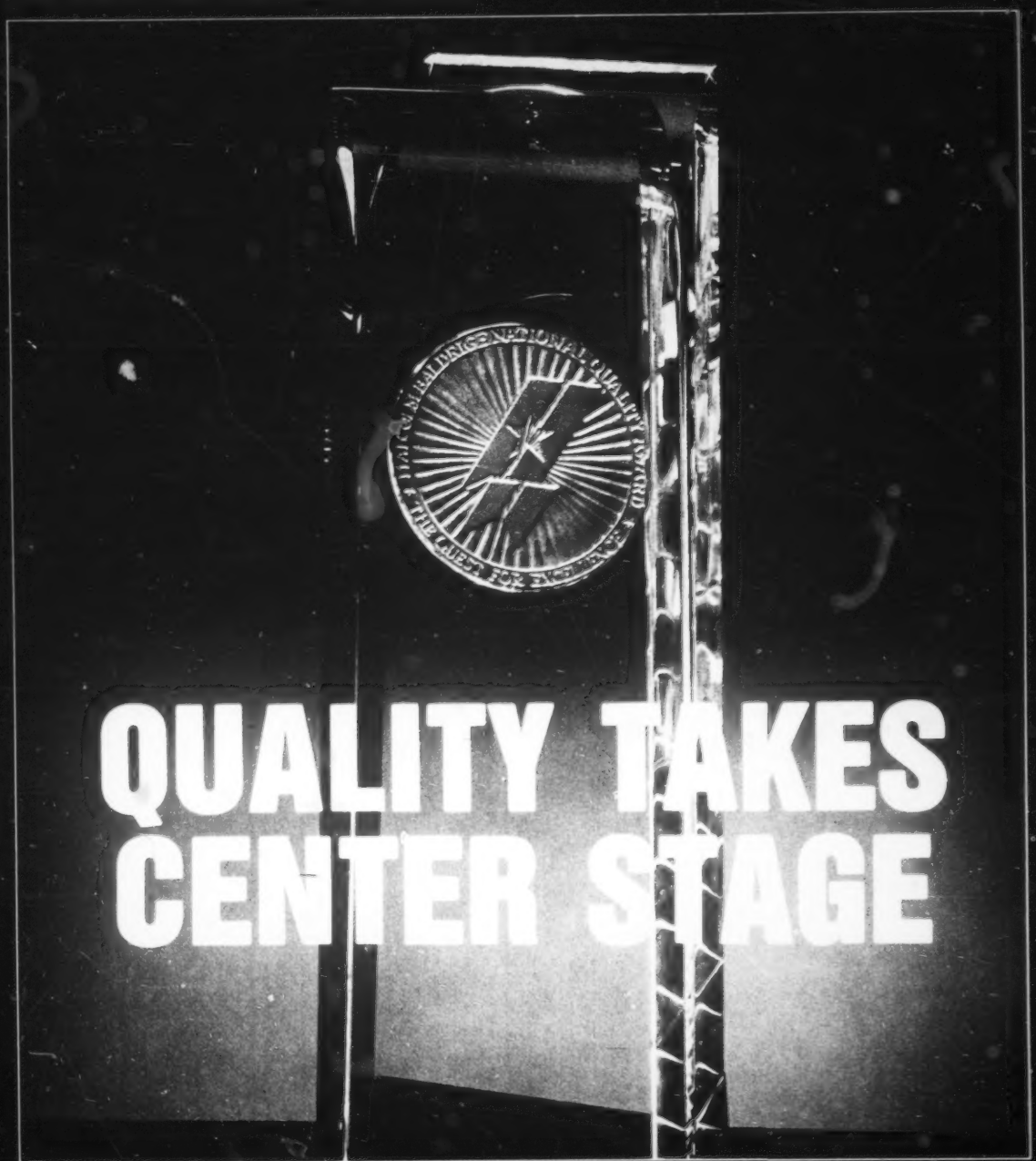
A HUEBCORE PUBLICATION

PurchasingWorld®

MANAGING THE BUSINESS OF BUYING

FEBRUARY 1991



QUALITY TAKES CENTER STAGE

- MRO: the forest or the trees?
- Express packages face problems
- Reality check on the economy
- Editorial: no freebies

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22 Quality takes center stage

Quality has a leading role in the long-range plans of most of todays' top companies. The guiding force, in many cases, is the effort to meet the guidelines of the government's Malcolm Baldrige National Quality Award. What companies are making this effort, and how are they faring? *PurchasingWorld* examines these issues in the first of a series of articles on quality.

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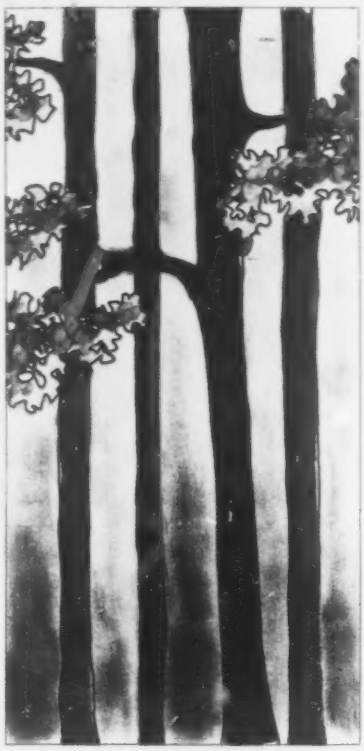
In a country renowned for team sports, somehow the team concept has had a tough time establishing itself in U.S. business. An expert examines how to remedy this situation.



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PurchasingWorld

Changing the message

Have you ever been on the receiving end of a buzz saw? I have.

Wielding it were purchasing professionals like you and three of our columnists, Dr. Ken Killen C.P.M., Bob Janson C.P.M., and Lou DeRose. You know them for their expertise in purchasing management and negotiations and read their columns in *PurchasingWorld* magazine.

What you may not know is that all three have served on the Ethics Committee of the NAPM. Under chairman Bob Janson they have been instrumental in hammering out the new NAPM Standards and Guidelines for Ethical Purchasing Practices. *PurchasingWorld* has publicized this effort and subscribes to this Code of Ethics.

They, like other *PurchasingWorld* readers, have read me the riot act about an advertisement that promised free gifts.

For the record, *PurchasingWorld* does not subscribe to, endorse, or approve of any such practice. Nor will *PurchasingWorld* magazine accept any advertisement offering such incentives in the future. In the past, ads have not been screened for such offers. They will be in the future.

Here's a sampling from our readers about just how strong they feel about purchasing ethics:

- from Diana M. Vucasovich, purchasing manager, Ameron HC&D, "In a day and age when purchasing professionals are trying to project a 'cleaner' image of their profession, it is sad to see the 'good old boy' style of selling/purchasing still alive and well."
- from Jack D. Stoddard, vice president-corporate purchasing, Pfizer Inc., "As you are no doubt aware, the purchasing profession has long been trying to 'clean up its act,' and this type of advertising does nothing but hurt our image as a whole. I would hope that no ads of this nature would be accepted by your magazine in the future."
- from G.A. Cigala, purchasing manager, AT&T, "I find it hard to believe that a magazine which expounds the high ethical values of the NAPM would run such an ad. The ad, which of course does not contain any pricing, violates even the most basic of purchasing principles."

I know that they speak for all of you and that you join with me in congratulating them for their candor and concern.

The sad fact is that such unethical sales practices continue and meet with some success. One way to begin addressing the problem is to establish standards and guidelines for advertising (the message) in purchasing magazines and journals (the messengers). *PurchasingWorld* proposes and is willing to participate in a conference with purchasing and advertising professionals, preferably under the auspicies of NAPM, to discuss changing the message.

This could become an important first step to reduce any disparity between the ethics practiced by professional buyers and those who would sell to them.

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PW PREDICTS

Credibility/reality check

Last November (when I was still keeping the faith that the economy could escape recessionary conditions this year) a reader asked me if I actually believe what I write. My response was twofold: First, the economy is very resilient and as of last November, recession still could have been avoided; Second, I've always tried to report the good and the bad while looking beyond the obvious, keeping purchasing professionals as the focal point.

For example, last October on this page, in an article entitled *International interdiction, domestic decay,* I made two observations: *"According to latest revisions, real gross national product has grown less than 2% for five consecutive quarters now. This is a wish come true for Alan Greenspan, Chairman of the Federal Reserve, who has espoused the strategy of forcing economic growth below its potential in order to tame inflationary pressures. Unfortunately, this strategy, while theoretically excellent given no external shocks, could condemn the U.S. to a significant economic correction if Middle East developments escalate, or even worse, stagnate."*

The article concluded with, *"Unfortunately, the longer the Iraq situation persists, the greater the danger, for there are no instances in all of history where a nation has benefited economically from a prolonged military encounter while it was in progress."*

It turns out that the economy was solid heading into 1990's final quarter, as the third quarter gross national product advance now confirms. The problem in the last quarter of 1990 was that nothing offset the collective retrenchment of businesses and consumers which was severely intensified by the Middle East commotion: exports failed to reach their potential; the Fed remained too hesitant in providing enough monetary stimulus; government spending was tightened in an attempt to revive some fiscal responsibility; and not even the spirit of the holiday season was able to propel consumer spending.

Even with soaring oil prices the central bank should have been easing late last year, following two years of very restrictive monetary policy. Uncertainty due to the persistence of the Iraqi crisis wasn't the fundamental cause in our economic contraction, it just accelerated and worsened it.

Scary thing is, the current downturn may have yet to bottom-out, and numerous downside risks regarding the recession's length and unpleasantness are not only surfacing, they're intensifying.

If, in the current downturn, a substantial amount of dissaving occurs (use of savings to meet necessity purchases), consumers and businesses will be forced to build cash reserves before re-engaging in spending, depressing the startup of the eventual recovery.

The service sector is likely to be less recession-proof this time around, too. Retail inventories are high and many firms in the service sector are burdened with a great deal of debt. Moreover, the financial services industry is in the midst of structural shakeout.

Even the removal of higher oil prices and uncertainty fueled by the crisis in the Gulf are no longer enough to counteract the economic contraction we are presently engaged in, though the probability of a milder and shorter recession would be greater.

Perhaps most troublesome is our modern day liquidity trap. The Fed's monetary policy ease hasn't reduced the credit crunch being applied by commercial banks. It could be that the need for banks to raise revenues and reduce their exposure to risk will keep credit standards tight, loan availability down and the prime rate up. If the Federal Reserve fails to sufficiently stimulate aggregate demand through the availability of credit, the expected short, mild recession will almost assuredly turn into a more "meaningful" economic correction.

By John W. Sheridan
Chief Economic Editor

Rubber growth easing

Overview: World rubber consumption advanced 4.6% in the 1986-1989 time period, but that pace is expected to taper off during the next few years.

Demand: Since the last recession, world consumption of rubber has grown over 4% annually. In 1989, the total market exceeded 15.6 million metric tons (mmt), with natural and synthetic demand exceeding 5.3 and 10.2 mmt, respectively.

Developed countries remain the largest demanders of rubber, accounting for over 71% of total world consumption. The top three: United States, 3 mmt; Soviet Union, 2.6 mmt; and Japan, 1.8 mmt. In terms of growth, however, the highest rates will be witnessed in the developing countries and Eastern Europe.

Original equipment manufacturers' (OEM) tire consumption should decline as motor vehicle production slows according to car-maker's plans, with continued geographic shifting anticipated for OEMs. Overall, OEM tire demand is forecast to advance 2.6% per year through 1995.

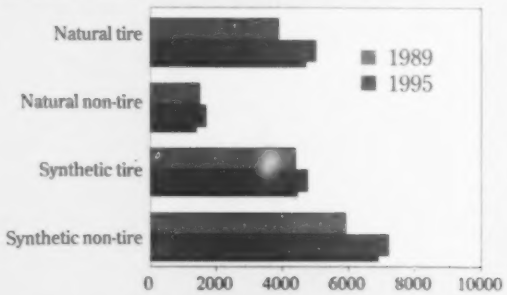
Replacement tire demand is also expected to start falling off, due to a reduction in miles driven per vehicle. Over the next five years, this market is expected to display growth of 2.5% annually.

Supply: Leading Edge Reports, Cleveland, estimates that total rubber production will grow 3.4% yearly, surpassing 18.8 mmt in 1995, with natural rubber production topping 6.7 mmt and synthetic rubber production reaching 12.1 mmt. In tires, global production could surpass 1 billion units in 1995, up from 886 million units in 1989, with the U.S. expected to remain the largest producer.

Outlook: With world tire demand forecast to increase only 2.5% per year over the next five years, global consumption of rubber should begin easing.

World rubber consumption

thousand metric tons



Source: Leading Edge Reports

NTMA down on 1991

According to the National Tooling & Machining Association (NTMA), Ft. Washington, MD, 1991 may be a very difficult year as far as the majority of tooling and machinery companies are concerned. Due to the persistence of the Middle East dilemma, and already weak domestic markets, the NTMA is now predicting negative growth in the following customer markets: motor vehicles and parts (-7%); aircraft, space vehicles and missiles (-8%); household appliances (-5%); and electronic components (-3%).

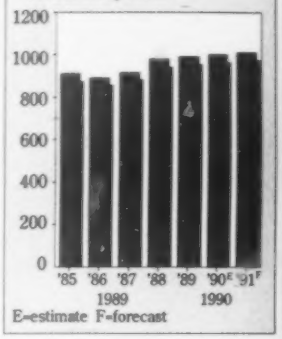
As a result, industry sales of tools, dies and fixtures are forecast by the NTMA to fall 7% this year, with molds (-5%), special machines (-9%), precision machining (-10%) and aerospace machining (-8%) also experiencing poorer performances.

Record year for coal

Last year the coal industry compiled its fourth consecutive record-breaking year. Industry observers, however, say the market will be hard pressed to duplicate 1990's production level this year. According to the National Coal Association (NCA), U.S. coal production and consumption are both estimated to have topped 1 billion tons last year, the first time in history. Behind the record levels: an increase in utility coal burned, an increase in exports, and an unusually high demand for coal in utility stockpiles. The NCA expects coal consumption to continue its ascent in 1991, increasing about 2%. Production, however, is forecast to drop 15 million tons, or roughly 1.5%, because of flat or declining demand from all but the electric utility market.

U.S. coal sales

millions of tons



Paper costs, capacity up

Profit margins in the paper industry have been feeling the squeeze since mid-1990, but things are likely to get even worse. Prices and profit margins are expected to continue the slide they began last year. The WEFA Group, Bala Cynwyd, PA, projects that strong increases in capacity during the past two years, combined with little stimulation in demand will keep operating rates trending downward in 1991.

Phone industry is hot

Overview: Telecommunications—the science and technology of communicating electronically—is continuing its progression to a more competitive market. AT&T's 1984 breakup into eight parts has ushered in a new era, with the long distance telephone market and the manufacture of communications equipment becoming extremely competitive. Even the seven "baby bells" (each of which is responsible for a section of the country's local phone network) are finding the going tougher, due to private networks and cellular telephone services.

Demand: Increased competition achieved exactly what economic theory predicted it would—lower prices. Theory also says that for a "normal" good, more is preferred to less at a lower price. Again, this is exactly what happened. Sharp price cuts have stimulated an increase in calling volume of about 12% annually since 1984, though the annual rate had fallen near 9% as of early 1990.

Supply: While more than 270 companies provide long-distance phone services, the industry remains highly concentrated. In fact, the three largest firms control 95% of the market. AT&T continues to possess more than 50% of the market, while MCI and US Sprint claim most of the rest.

Outlook: When MCI and US Sprint initially entered the market, regulation impeded AT&T's ability to react, leaving the giant charging artificially high prices because of access charges (fees—paid by long-distance customers— which subsidize local phone service). As a result, AT&T's market share has dropped from 100% in 1983 to roughly 71% currently (see chart).

Standard & Poor's expects operating incomes in this industry to grow 10% through the mid-1990s, due to high calling volume growth and increasing efficiency (all-digital networks).

Long distance phone services

*percent, share of market**

* Estimate

Electrical products still sliding

The National Electrical Manufacturers Association (NEMA) predicts that shipments of electrical products, estimated to have dropped roughly 1% in 1990, will experience a similar slide in 1991. This year, NEMA members expect exceptional growth to be displayed by extracorporeal lithotripters (50%), medical picture archiving and communications (20%), low voltage transient surge suppressors (19%), and ultrasound imaging equipment (10%). Not expected to fare so well in 1991: building wire and cable (-0.5%), switches (-2.3%), health care facility equipment (-2.5%), transformers (-2.9%), steel rigid conduit and EMT (-3.0%), tapered tubular steel structures (-5.0%), and magnet wire (-8.0%).

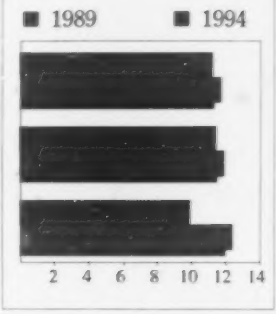
Chlor-alkali output still growing

Despite intensifying regulatory pressures on chlorine and its end uses, domestic chlor-alkali production is forecast to advance 2.1% yearly through 1994, at which time it should top 37 million tons. U.S. production of chlorine and caustic soda will advance only 1% per year during this time, but output for soda ash will jump 4.6% annually.

Behind this solid chlor-alkali production growth is the expected consumption

Chlor-alkali output

million tons



gain soda ash should display. The Freedonia Group, Cleveland, projects soda ash demand will jump 3.4% per year through 1994. And, while chlorine consumption is expected to experience only moderate yearly growth (0.5%) in the next five years, due largely to its setbacks in the pulp and paper industry, the large polyvinyl chloride market will prevent chlorine use from falling in the 1990s.

Air cargo outlook favorable

Cargo executives at the major trunk carriers (United, Delta, American, Northwest, Pan Am, TWA, and Continental) remain upbeat that, despite recessionary conditions and volatility in fuel prices, the domestic air freight business will continue to be a growth market in 1991.

In a survey by Right-O-Way, Inc., San Francisco, airline cargo managers anticipate revenue growth from 2-16% this year.

Aluminum market solid

Overview: Over 16 billion lb of aluminum ingot and mill products were shipped domestically in 1989 by the $21 billion industry. By 1994, however, that number is expected to approach 19 billion.

Demand: The dollar's slide against the Japanese yen and the German mark will, along with stronger economies overseas, allow for improvement in the U.S. aluminum trade balance. In fact, growth in the export market is forecast by the Freedonia Group, Cleveland, to exceed annual increases in domestic consumption.

In the U.S., the container and packaging sector will remain the largest end-market for aluminum ingot and mill products, advancing 2.4% per year to 4.8 billion lb in 1994. Helping to keep demand up and alternative plastic materials out of the market will be the recyclability of aluminum cans.

Consumption in the automotive and other transportation equipment market is forecast to top 3.7 billion lb in 1994, climbing 3.6% annually over the next five years. The major factors stimulating aluminum in this arena: the continued down-weighting of automobiles; aluminum's corrosion resistance, and its low weight-to-strength ratio. Sluggish activity in the building and construction sector will temper aluminum shipments to this market.

Supply: Aluminum is the second most abundant metal element in the earth's crust. In the U.S., there are approximately 15 primary aluminum producers, with the top five firms accounting for roughly 70% of the market. Due to a lack of bauxite reserves at home, a significant number of primary aluminum operations are centered overseas.

Outlook: Aluminum's dominance in the beverage container market, its growing appeal in the auto and aerospace industries, along with the development of new products (aluminum-lithium alloys) should boost domestic shipments of aluminum ingot and mill products 2.5% annually through 1994.

Aluminum product shipments
percent annual growth, 1989-1994

Source: The Freedonia Group

Textile sales to remain solid

Sales of domestic textile chemicals are forecast to remain solid during the next five years, according to the Freedonia Group. The Cleveland-based research firm reports that despite strong import competition, which will limit per-year growth in the textile and apparel industries to roughly 1%, U.S. textile chemical sales should advance nearly 3% annually through 1994, when total market sales will reach $1.7 billion. Best opportunities for chemicals in the textile market: water and soil repellants, and durable pressed resins.

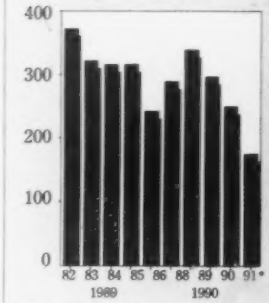
Aluminum costs moderating

In a study recently released by Anthony Bird Associates, a London-based consulting group, primary aluminum production costs advanced only 5% in the first half of 1990, which compares extremely favorably to 1989's experience, when costs jumped 15%. Since 1986, production costs have risen 39%.

Mercury market very soft

Dealers are reporting that the U.S. price for mercury has fallen into the $175-190 per 76-lb flask range, with sales said to be very weak or inactive. Meanwhile, the European market is surprising many with its lack of sales thus far this year, with prices there currently in the range of $140-150 a flask.

Mercury
dollars per 76-lb flask



*Through January

Chemical profits slide in 1990

Last year's earnings for the U.S. chemical industry didn't match the record-setting year of 1989, when after-tax profits reached $24.8 billion. Profits, while remaining strong in 1990, are estimated to have dropped into the $19-23.5 billion range.

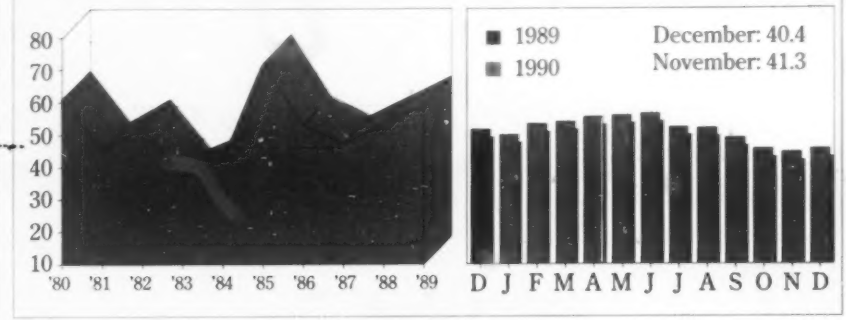
Sales remained strong in 1990, but price increases, along with rising capacity which made it difficult to pass on cost pressures, worked to dampen the industry's profit picture. Suggesting solid performance in the years to come: capital outlays last year surpassed $20 billion, while research and development topped $12 billion.

BUSINESS DATATRAK

By John Sheridan, chief economic editor

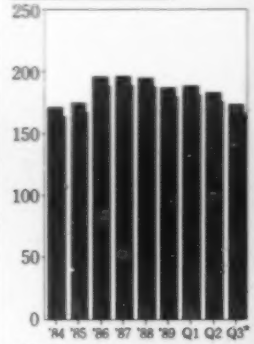
N. A. P. M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



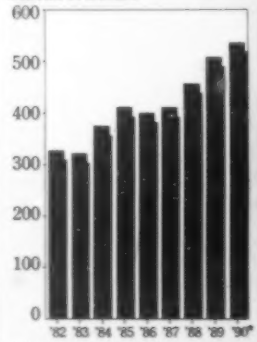
Leading Indicators

Residential investment
billions of 1982 dollars



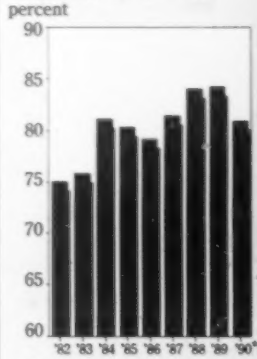
* November 1990

Capital spending
billions of dollars



* As of last survey, July

Capacity utilization
percent



* November

Source: Dept. of Commerce; Board of Governors

KEY ECONOMIC TRENDS

Destination unknown

One theory on economic activity maintains that there are overlapping business cycles, where minor waves continually gyrate around a more pronounced long-run trend.

Minor cycles are primarily determined by production plans and consumer purchases, while investment patterns play a critical role in shaping the severity and length of major cycles.

Which cycle are we currently experiencing? To answer this question adequately, analysis must include: 1) the potential strength of the economy's self-correcting forces, and 2) the environment for business investment.

In an economic downswing, self-correcting forces gradually gain strength. Traditionally, production falls faster than consumer spending or retail sales, which allows excess inventories to be worked off. On the surface, it appears that even a sharp drop-off in consumption can be absorbed, because manufacturing inventories are at historically low levels. Further downstream, however, retail inventories are a concern, implying that the consumption buffer will still be critical.

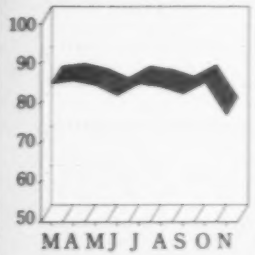
The other main stabilizing factor is the availability of cheaper credit, making investments which would have been previously unprofitable, feasible.

Thus far, these two major stabilizers haven't displayed the strength necessary to keep the current economic contraction from intensifying. Falling disposable personal income and consumer confidence, along with rising unemployment and high levels of existing debt, suggest that consumer spending has yet to stabilize. With respect to money, thus far the commercial banks haven't followed the lead of the Federal Reserve in easing credit, either.

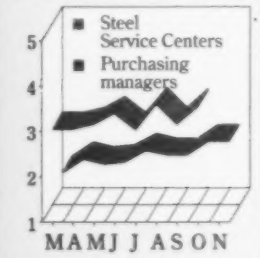
As for the investment part of this analysis, major business-cycle declines are correlated with a serious deterioration in the long-term outlook for both housing and capital spending (see charts). If business expectations about plant and equipment spending have stagnated and the construction industry remains dormant, the previously mentioned self-correcting forces will be insufficient in reviving a sustainable expansion. For when this is the case, even lower interest rates won't stimulate investment, because the demand for loanable funds, even at these low rates, doesn't exist.

Steel

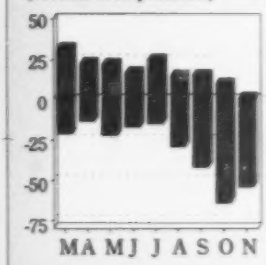
Operating rates



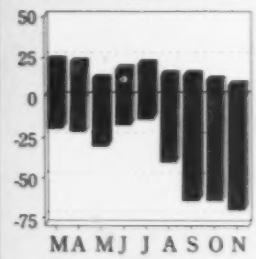
Inventories
(months supply on hand)



Demand (Steel Service Centers)
(Percent of respondents)



Demand (NAPM)
(Percent of respondents)



Source: Steel Service Center Institute
NAPM Steel Buyers Committee

One factor affecting investment is the degree of building that occurred in the preceding expansion. If overbuilding took place—and it appears that it has—demographic changes, depreciation and obsolescence will be necessary before the climate surrounding new building investment is favorable. Also important are the capital intensive needs of high-growth industries, which at this time seem only moderate.

Most economists remain optimistic that after the Middle East situation is resolved, investment will rebound quickly. With all the economies of the world in recession except for Germany and Japan, however, such optimism may be a false sense of security.

If in fact the economy is only in a mild downswing, consumer spending will stabilize by the end of the first quarter, and the demand for loanable funds will increase quickly following the conclusion of the Iraqi turmoil.

METALS SCENE

Service centers' surprise

The nation's $24 billion dollar steel service center industry surprised most everyone with its November performance, which saw the average daily shipping rate (ADSR) jump 4.1% from October levels. Advances in six of the seven product categories were recorded, with alloy up 8%, carbon tubing climbing 7.2%, plate increasing 6.5% and carbon bars moving up 6.4%.

Through the first 11 months of 1990, steel service centers ADSR performance stood 1.3% ahead of 1989's record pace. Steel Service Center Institute (SSCI) respondents are clearly uneasy about the forthcoming months. Incoming order expectations: 54% of SSCI members expect a decrease during the next three months. Members are also expressing an increasing level of concern over receivables. In fact, 39% of those polled said that customers are now paying less promptly.

Inventory jumped modestly last November, which is a trend that could prove costly if not corrected in the coming months, especially since incoming orders are expected to be waning. On a positive note, however, Andrew G. Sharkey, SSCI president, commented, "We expect that at year-end, inventories will be well below the 6.9 million-ton-level that was established at the end of 1989."

The WEFA Group recently reviewed the performance of the steel industry in previous recessions. The report stated, "An examination of recent past recession years shows steel shipments off only 16% in the milder 1980 recession, and 27% and 30% in more severe 1975 and 1982 recessions."

The Bala Cynwyd, PA, researchers are still forecasting a mild recession, lasting only through the end of this quarter. Expectations for corporate profits and industrial production, however, suggest that the slide in capital spending from steel buyers might be greater than is currently being predicted.

The stock of steel currently being held by producers is also stimulating rising concern. The latest figure of more than 2.3 months' supply on hand is significantly higher than any level which has existed since mid-1986. Between the second-half of 1986 and early 1989, producers had been operating within a 1.6-1.9 months' supply band. With the marketplace reporting a significant deterioration in new steel orders, it's no wonder buyers are confirming noticeable reductions in leadtimes.

Initial evidence indicates that reduced capital spending plans by many steel users and weakened auto builds have first quarter steel bookings off substantially.

Import prices

(Compared to domestic)

STEEL BUYERS
ABOVE 23%
SAME 37%
SLIGHTLY BELOW 37%
SUBSTANTIALLY BELOW 3%

SERVICE CENTERS (CARBON)
ABOVE 0%
SAME 73%
5-10% BELOW 25%
11-20% BELOW 2%
OVER 20% BELOW 0%

REGIONAL PERSPECTIVE

Employment deteriorates

The first quarter is traditionally a period of slow job growth, but hiring expectations this year are, even on a seasonally adjusted basis, below average. Worse yet, the employment market seems to be continuing its six-month trend of becoming more dismal.

The world's largest temporary-help firm, Manpower Inc., surveys more than 15,000 employers in 466 cities each quarter regarding hiring expectations for the permanent workforce. During its 15-year history, the Milwaukee, WI, firm's Employment Outlook Survey has been a significant indicator of labor force trends.

Of the firms interviewed, 15% intend to increase employment this quarter while 16% expect to initiate cutbacks. This continues the trend of the past year. Last year in the first quarter, employment hirings stood at 20%, while job declines registered only 12%.

According to Manpower Inc. President Mitchell S. Fromstein, the report suggests that "hiring activity is now reaching recession depths in all geographic regions except the midwest and is present in all business categories."

Regionally speaking, job deterioration is most apparent in the northeast, where net hiring is declining sharply. Workforce reductions in the northeast are also continuing, with the net hiring factor for the region measuring -9%, its lowest level since the survey began, with the current level also well below the recessionary conditions experienced in 1982. While this first-quarter data is ominous, insight suggests that employment prospects throughout the country have yet to bottom out.

Unlike the previous two recessions, when the Midwest was the hardest hit by the incoming economic contraction, thus far it is faring relatively well. A number of reasons surface: the region's prior recession experiences led it to become more diversified; but probably the most important reason for its buoyancy is the performance of its manufacturing base. Domestic manufacturers are more competitive today than they were 10 years ago, the devaluation of the dollar and pockets of export strength in Japan and Germany are a plus, and prior to the Iraqi invasion of Kuwait last summer, the manufacturing sector was displaying a modest revival.

The Midwest's net hiring factor stood at +6% in the first quarter of 1990, and while it is clearly weaker in the first quarter of 1991 (0%), it remains significantly higher than 1982's figure of -12%.

The south continues to perform admirably (+1%) in the midst of national recession, though the current environment is substantially weaker than it was just one year ago (+12%). In the West, employment opportunities are slipping fast, though its net hiring factor remains positive (+1%).

The national results by industry were highly correlated to what theory tells is associated with recessionary conditions. The steepest decline is centered in the construction segment, where 27% of the firms surveyed plan to reduce their permanent labor force. The first quarter net hiring factor of -17% hasn't reached the 1982 level of -22% yet, but its recent trend suggests that after the second quarter survey is released that no longer will be the case.

Somewhat surprising is the quick drop in job expectations in the wholesale and retail trade sector, but this may have something to do with the need to work off excess inventories. According to Manpower Inc., "the present net hiring factor of -12% indicates weakness that extends well beyond the traditional seasonal cutback of holiday extras. It is, in fact, the lowest point recorded in nine years."

Manufacturers, both durable and non-durable, estimate that hiring will fall off from last year's level, but remain above recessionary conditions this quarter.

Hiring plans
1991:Q1, percent (increase/decrease)

	National average	Midwest	West	South	Northeast
Mining	14	-25	44	11	-25
Construction	-17	-24	-5	-14	-28
Manufacturing					
durable	2	3	1	2	-2
non-durable	3	7	2	4	-1
Transportation	3	6	-3	7	-4
Wholesale	-12	-12	-13	-7	-18
Finance,	1	2	10	3	-13
Education	1	8	7	2	-12
Services	9	11	12	13	-3
Public administration	1	0	4	3	-7
All industries	-1	0	1	1	-9

CURRENT PRICES

Awaiting downward price correction

The most recent oil shock has initiated another round of domestic stagflation (stagnant output growth accompanied by rising inflation). Estimates are for fourth quarter consumer prices to display a rate of increase near 7%, with the growth rate of producer prices topping 10%.

Most of this rise is due to soaring oil prices and the uncertainty surrounding the Gulf crisis. Of concern, however, is that the core rate of inflation at the consumer price level has risen to 5.3%, roughly 1% higher than it was 12 months ago. The core rate of inflation for producer prices remains in the 3-4% range, suggesting that temporary distortions are impacting the consumer level.

While the current energy-induced inflation is expected to push the consumer price index to 5.5-6.5%, 1-2% above what it otherwise would have been in 1990. A return to normalcy in the Middle East will create a significant downward price correction. The economy should be in a state of disinflation (declining levels of inflation) by mid-year, assuming the worst-case scenario from the Iraqi commotion isn't realized.

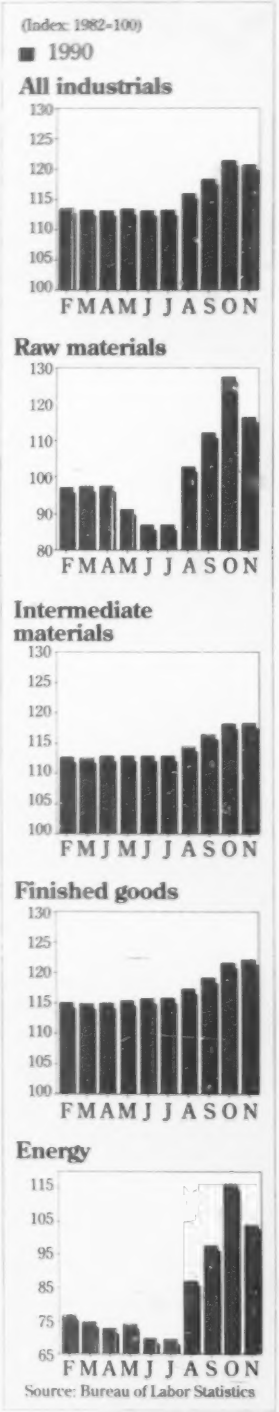
Economic consulting firms are very optimistic about the rate of inflation which will exist in the second half of 1991. Both the WEFA Group, Bala Cynwyd, PA, and Laurence H. Meyer & Associates (LHM&A), St. Louis, predict that consumer prices will fall below a 3% annual rate of growth in the last three quarters of this year. With respect to producer prices (finished goods), both firms forecast price increases of less than 1% for 1991 overall.

This month's breakdown

Index 1982=100

	Latest level	month ago	year ago
Bearings	130.9	0.2	4.1
Bolts, nuts, etc.	116.6	0.1	1.6
Chemicals, inorganic	113.0	0.3	2.2
Chemicals, organic	120.8	0.8	8.6
Concrete products	115.0	0.7	3.0
Corrugated containers	107.4	-0.1	-4.5
Cutting tools, small	114.2	0.7	1.7
Electrical lamps (bulbs)	130.7	0.0	4.9
Electronic components	118.1	0.4	-1.1
Fans and blowers	124.9	0.2	3.1
Foundry and forge products	117.9	0.3	2.3
Fuel oil (residual)	80.4	11.5	63.4
Furniture, commercial	134.6	0.1	2.9
Gasoline	98.3	0.2	58.3
Glass, flat	106.8	0.2	-2.1
Glass containers	121.0	0.0	4.6
Gypsum products	104.8	1.6	-6.0
Hand tools	136.0	0.4	5.3
Hand tools, power driven	121.8	0.2	3.4
Industrial furnaces	128.5	0.2	2.6
Integrating and measuring instruments	127.7	0.3	3.5
Internal combustion engines	121.5	0.1	4.3
Lubricating oil	136.6	8.5	23.5
Lumber millwork	130.8	0.2	1.9
Material handling equipment	115.9	0.0	2.4
Metal containers	114.0	0.0	0.8
Metal mill shapes	133.3	-1.7	-1.5
Metal tanks	114.9	0.4	2.8
Metalworking machines	124.5	0.3	3.8
Motors and generators	132.9	0.0	2.2
Motor trucks	123.7	0.0	3.9
Nonferrous metals	135.2	-3.4	-1.0
Office and store equipment	108.9	0.1	-1.6
Paperboard	135.0	0.8	-3.4
Paper boxes and shipping containers	129.5	0.2	-1.3
Paper office supplies	122.3	0.3	0.8
Paint	126.4	0.3	4.0
Plastic resins	128.6	2.8	4.0
Precision measuring tools	130.5	1.0	3.5
Pumps and compressors	120.4	0.1	3.5
Refactories	123.2	0.2	3.0
Rubber belts and belting	121.9	0.2	3.6
Scales and balances	109.4	-0.2	1.9
Switch gear	126.3	0.3	2.5
Textiles, synthetic fibers	106.6	0.3	-0.1
Textiles, gray fabrics	117.4	0.6	0.8
Tires and tubes	98.1	0.8	1.0
Transformers and power regulations	121.7	0.5	2.5
Welding equipment	129.7	0.4	4.9
Wire and cable	143.5	-2.5	-2.3

Industrial prices



Source: Bureau of Labor Statistics

PROCUREMENT

Good news/ bad news

This year will be a case of the bad news first, according to the National Association of Purchasing Management (NAPM). In their semiannual economic forecast, purchasing pros say they expect recessionary conditions to persist through mid-year.

Purchasers reported that 1) capital spending outlays were drastically lower in 1990 than their mid-year estimates; 2) their firms are operating at a significantly lower percentage of capacity (82% versus 85% in 1989 and 88% in 1988); 3) their firms are planning only a modest increase (2.2%) in capital expenditures this year; and 4) 72% of the survey participants expect prices to move 3.3% higher through the end of April, though when all respondents are factored in, the price advance is only 2%.

Not since December of 1982 have so many buyers been this negative. In answering the question regarding the 12-month outlook, 12% of the members said they were worried/pessimistic, as compared to only 2% at the time of the last semiannual economic forecast.

Buyers are optimistic about the continued strength of exports, and feel the value of the dollar relative to the yen, mark and pound will be weaker during the next 12 months.

According to the latest Report on Business, the U.S. economy is continuing its downward trajectory. The Purchasing Managers' Index sank to 40.4 percent in December, which is the lowest reading since the trough of the previous recession.

The trouble is, the current correction seems to still be gaining momentum.

New orders fell in December for the sixth consecutive month, plummeting to 38.3%.

It will be awfully difficult for the economy to reverse its current descent until this engine of growth is revived. Moreover, the production and employment figures are unlikely to improve until new orders rebound.

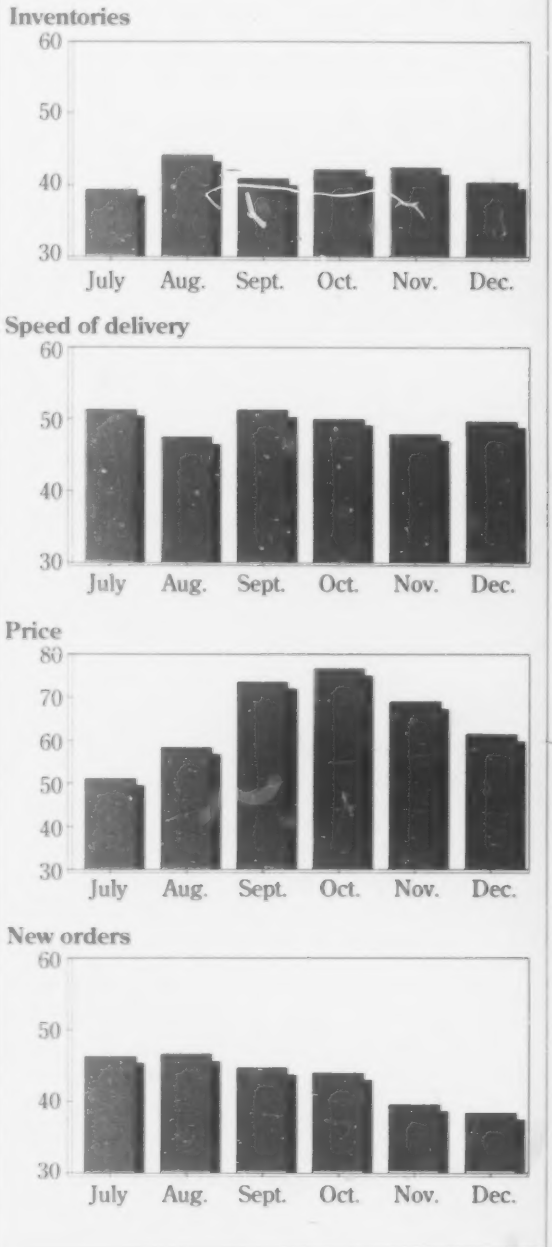
Computers in purchasing

The Universities of Lowell and Toledo, in conjunction with the purchasing management associations of Boston and Toledo, conduct a monthly survey on business conditions in their respective regions. Last year, the two reports also included a set of survey questions concerning the utilization of computers by purchasing professionals. The most recent computer study is a follow up to the original, which was compiled in

NAPM procurement trends

(Seasonally adjusted diffusion indexes)

An index where 50 is defined as the neutral level, to the extent a reading is above 50, it represents an expansionary tendency. More particularly, rising inventory, prices and new orders are seen as positive signs of economic growth. A trend towards lower deliveries is similarly interpreted.



1981.

At that time, only 53% of those answering the survey indicated that they used computers in the office. Major applications in 1981: 80% of those responding said they used a computer to maintain inventory records; 58% used it for vendor lists; 46% monitored purchase orders with it, 14% did MRP on it, while only 8% worked on it for vendor analysis and selection.

The survey results for 1990's study appear in table 1. Interestingly, while MRP I (material requirements planning) and MRP II (manufacturing resource planning) are on the verge of being standard, EDI (electronic data interchange) is off to a slow start.

Moreover, the survey reports that nearly 80% of those responding will have an MRP system in place by early 1991, and that more than 90% of the firms in manufacturing will possess such a system.

Purchasing tasks and computer usage: maintaining inventory records 87.3%, maintaining a list of vendors 89.9%, monitoring status of purchase orders 77.9%, keeping vendor performance rating 44.7%, MRP 61.8%, monitoring quotes and competitiveness 14.5%, maintaining purchase specifications 39.5%, budgeting 56.6%, and EDI 22.0%.

LATEST SPOT MARKET PRICES

	Latest price	Previous month	Year ago
FERROUS METALS			
Steel, bars, stainless, 303, cwt	188.00	188.00	179.00
Steel, bars, HR carbon, 1000 series, cwt	19.20	19.20	21.00
Steel, bars, HR carbon alloy, cwt	25.00	25.00	24.50
Steel, bars, CF carbon 12L14, cwt	34.00	34.00	34.50
Steel, plates, carbon, cwt	24.25	24.25	25.20
Steel, plates, strip mill, cwt	25.35	23.60	23.60
Steel, plates, alloy, cwt	34.05	34.05	34.55
Steel, sheets, C.R., class 1, cwt	31.90	30.65	29.65
Steel, sheets, HR, cwt	24.00	23.00	22.25
Steel, sheets, stainless, 304, cwt	124.00	124.00	124.00
Steel, strip, HR carbon, cwt	22.10	22.10	22.10
Steel, strip, CR carbon, cwt	36.18	36.18	38.30
NONFERROUS METALS			
Aluminum, unalloyed ingot, lb	0.70	0.71	0.82
Aluminum, alloyed ingot, 355, lb	0.94	0.94	0.95
Aluminum, secondary ingot, 380, 30000 lb lot	0.71	0.71	0.73
Antimony, lb, merchant	0.80	0.85	0.95
Cadmium, N.Y., dealer, lb	2.90	1.20	4.60
Copper, electrolytic wire bars, lb	1.30	1.23	1.19
Copper, cathode, full plate, lb	1.19	1.16	1.10
Gold, N.Y., troy oz	390.80	384.85	402.90
Lead, common, N.Y., lb	0.37	0.38	0.42
Magnesium, pig ingot, (99.8%), lb	1.50	1.63	1.63
Mercury, 50 fl. lots, N.Y., fl.	175.00	185.00	270.00
Molybdenum, oxide, canned, lb	2.70	3.35	3.32
Nickel, cathode, dealer, lb	3.66	3.77	5.85
Platinum, dealer, oz	408.00	418.00	494.00
Silver, N.Y., troy oz	4.12	4.10	5.20
Tin, N.Y., dealer, lb	2.50	2.63	4.38
Zinc, high grade, lb	0.63	0.70	0.82
Zinc, die casting alloy, No. 3, lb	0.78	0.78	0.74
PAPER (unit=ton)			
Uncoated book #3 offset	940.00	940.00	940.00
Uncoated bond #4, 83 bright	920.00	900.00	900.00
Watermarked bond, 20 lb sheets	1090.00	1090.00	1095.00
Unbleached kraft paper, grocery bag, 30 lb	660.00	660.00	660.00
Bleached kraft, grocery bag, 30 lb	800.00	800.00	800.00
Solid bleached kraft paperboard, folding	830.00	830.00	830.00
Kraft linerboard, 42 lb, domestic, East	360.00	370.00	410.00
Kraft linerboard, 42 lb, domestic, West	370.00	380.00	410.00
Newsprint, 30 lb, East	565.00	565.00	540.00
TEXTILES (unit=lb)			
Acrylic, open-end spun, 1/18, unbranded	1.61	1.74	1.84
Carded cotton, ring-spun, 18/1	1.56	1.56	1.61
Carded cotton, open-end spun, 18/1	1.25	1.35	1.40
Combed cotton, ring-spun, 100%, 18/1	1.71	1.75	1.85
Nylon, textured, 70/2	2.70	2.70	2.45
Polyester, 50/50% carded cotton, 30/1	1.85	1.77	1.87
Polyester, ring-spun, 100%, 16/1, unbranded	1.54	1.48	1.58
Rayon, high-wet modulus	1.46	1.48	1.30
CHEMICALS			
Acrylonitrile, tanks, lb	0.36	0.36	0.40
Ammonia, anhydrous, tankcars, ton	125.00	125.00	123.00
Benzene, gal	1.50	2.00	1.50
Caustic soda, metric ton	335.00	335.00	320.00
Cresylic acid (over 25%), tanks, lb	0.60	0.60	0.55
Formaldehyde, 37%, (12%-15% meth.), tanks, lb	0.12	0.12	0.11
Glycerine, synthetic, 96%, tanks, lb	0.76	0.76	0.79
Methanol, syn., barges, Gulf Coast, gal	0.54	0.47	0.50
Naphthalene, crude, tanks, lb	0.20	0.20	0.16
Phthalic anhydride, molten, tanks, lb	0.51	0.51	0.41
Polyethylene resin, low density, lb	0.48	0.48	0.52
Polypropylene, homo-injection, lb	0.44	0.49	0.51
Polystyrene, general purpose grade, lb	0.58	0.58	0.59
Polyvinyl chloride, pipe grade, lb	0.36	0.36	0.44
Soda ash, light 58%, 100 lb, paper bags	160.00	160.00	135.00
Styrene monomer, 99.6%, tanks, lb	0.45	0.48	0.49
Sulfur, dark, Tampa, FL, long-ton	140.00	140.00	142.00
Sulfuric acid, 66%, commercial, tanks, ton	69.89	69.89	66.86
Titanium dioxide, anatase, reg., carlots lb	0.99	0.99	0.95
Xylene, Gulf Coast, spot, barge, gal	1.05	1.50	0.95
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	325.99	323.35	345.63
Lumber 2x4 pine, mbf, cl	315.31	315.38	321.47
Plyform, 3/4", msf, cl	592.22	595.80	570.00
Plywood, 5/8", msf, cl	353.10	361.95	360.21
Cement, type 1, bulk, ton	62.10	62.10	63.88
Sand, concrete, ton, cl	6.87	6.87	7.17
Ready-mix concrete, 3000 psi/cu. yd.	49.65	49.65	48.81
Crushed stone, base course, ton, cl	6.18	6.18	5.84
Concrete blocks, sand/gravel, 8"x8"x16", per hundred	84.47	84.47	87.17
Reinforcing bars, grade 60; per cwt.	21.49	21.71	22.10
Asphalt paving AC-20, ton	122.72	122.72	108.53
Concrete sewer pipe, 24", per ft, cl	17.50	17.79	18.00
FUELS			
Crude oil (W. TX Int.), bbl	28.44	30.25	20.40
Diesel (reseller rack, Chi.), gal	0.74	0.90	0.51
Heating oil No. 2 (N.Y.), gal, spot	0.81	0.86	0.56
Heating oil No. 2 (Gulf spot), gal, spot	0.79	0.84	0.48
Fuel oil No. 6 (N.Y.), tank car contract	23.35	23.35	18.75
Gasoline (prem unlded N.Y.), gal, spot	0.73	0.80	0.78
Gasoline (reg unlded N.Y.), gal, spot	0.71	0.78	0.59
Kerosene (reseller rack, Chi.), gal	0.82	1.00	0.60
Propane, spot	0.44	0.50	0.55
SCRAP MATERIALS			
Aluminum, old sheet & cast, cl	0.43	0.42	0.43
Aluminum, mixed clips, cl	0.48	0.49	0.50
Brass, yellow solids, cl	0.62	0.62	0.57
Copper, No. 1, brass ingot makers', cl	1.02	0.97	0.93
Copper, No. 2, brass ingot makers', cl	0.93	0.87	0.84
Steel, no. 1, hvy., dlvd., Pitts., ton	105.00	105.00	99.00
Steel, no. 1, hvy., dlvd., Chi., ton	105.00	105.00	108.00
Zinc, old, smelters scrap, cl	0.30	0.30	0.35
Zinc, die cast slab, smelters scrap, cl	0.36	0.36	0.37

Sources: Metals week, American Metal Market, Engineering News-Record (20-city averages), America's Textiles International, Journal of Commerce, Chemical Marketing Reporter, Pulp and Paper Week.

*This page has been revised to better serve you.